MR. RIDLEY AND RUBBER IN MALAYA.

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As the name of the late Mr. (later Sir) Henry Wickham is synonymous with the introduction of the rubber tree to the eastern tropics, so the name of Mr. Ridley is synonymous with the establishment of the Para Rubber Tree (*Hevea brasiliensis*) as a commercial plantation product in Malaya.

An anonymous article (probably by Ridley) published in the Agricultural Bulletin of the Straits and Federated Malay States (1903) gives the history of the introduction of the Para rubber tree into the Malay Peninsula. A few extracts from this article will therefore be appropriate in an appreciation of the work of Ridley in connection with rubber cultivation in Malaya.

On August 11th 1876 fifty plants derived from seeds received from Wickham on June 14th 1876 and grown in the Kew Gardens were sent to the Botanic Gardens Singapore. Owing to delay in payment of freight these plants all perished.

On June 11th 1877, twenty two plants were sent to the Singapore Gardens. In October of the same year Mr. Murton, Superintendent of the Gardens, planted nine of them in the Residency Gardens, Kuala Kangsar, F.M.S.

In a report dated February 3rd 1879 Mr. Hugh Low (then British Resident of Perak) writes "The Heveas are now 12–14 feet high. They take to the country immensely".

In a letter dated December 11th 1896 Sir Hugh Low writes to the Kew Gardens "As I am writing I should like to mention that the *Hevea brasiliensis* which having received from Kew through Singapore I planted at Kuala Kangsar in Perak grew magnificiently and fruited I believe 2–3 years before those of Ceylon. I distributed the seeds to various places in the neighbourhood and they are now to be found in Mr. Hill's Coffee Gardens in various parts of the peninsula and in several places in Perak.

"When Mr. Swettenham was at home in the summer I enquired of him as to their condition and found they were not thought to be of any value as some Dyaks had tapped some of the largest trees and found that scarcely any juice exuded from them (*Note:*—The effect of "wound response" on yield had not then been discovered). This unfortunate statement seems to have deterred Perak planters from paying any attention to Para rubber for some time". In 1882 other seeds obtained by Sir Hugh Low were planted by Mr. Wray at Kuala Kangsar.

In 1881 Mr. CANTLEY of the Botanic Gardens Singapore writes "the tallest Hevea (in the Gardens) is now 25 feet tall and 14 inches round the base. These trees commenced to fruit in 1882."

Later seeds were received in large quantities from Ceylon.

It was not until 1897 that the high price of rubber and low price of coffee stimulated the interest of planters (*Note:*—Had interest been aroused earlier and extensive planting taken place, the extraordinary boom of 1910 due to the rapid development of the motor industry would probably not have occurred).

Mr. RIDLEY served as Director of Gardens Singapore from 1888 until 1911. During most of this period—from 1888 until 1905—he was largely responsible for advising on agriculture throughout the peninsula, although during the later part of this period in the Federated Malay States, two Superintendents of Plantations in Perak and Selangor and a Federal Inspector of coconuts were employed by the Government before the inauguration of the Department of Agriculture F.M.S. in 1905.

Ridley thus remained in Malaya sufficiently long to see the fruition of his labour in regard to the commercial exploitation of the rubber tree (*Hevea brasiliensis*) in the extraordinary boom in rubber prices which reached its culminating point in 1910 and which was responsible for the subsequent extensive development not only in Malaya but also in the Netherlands Indies.

The writer of this article need make only a passing reference to the many-sided nature of his work in connection with other economic crops and in relation to his systematic work on the flora of Malaya, since this is being dealt with by others. Details of his work on numerous economic crops are contained in Annual Reports of the Botanic Gardens and Forests Department, S.S., of which he was also Director for some years and in the Agricultural Bulletin, S.S. which he initiated and edited for many years.

During the period prior to 1905 he was responsible for the distribution of an enormous amount of rubber planting material, seedlings and seeds from the experimental area planted in the Botanic Gardens Singapore, which formed the beginning of the oldest plantations in the peninsula. This activity is particularly noticeable from the years 1897 onwards. During this period also various systems of tapping and methods of coagulation were experimented with under his direction.

He also realised the possibility of utilising the seeds of the rubber tree as a source of oil, although for various reasons the marketing of seeds for this purpose has not developed on a commercial scale.

In 1903 he carried out certain manurial experiments with rubber plants in beds and showed the value of cattle manure in improving growth. Experiments under his direction also indicated that early morning and evening tapping gave the best results.

In 1904 rubber seeds from the Botanic Gardens were sent to Burma and in the following year to Jamaica, Lagos and Nigeria. It is perhaps fortunate that these did not develop successfully in various countries to which they were despatched.

One interesting fact emerges from Mr. RIDLEY'S Annual Report for 1909 which is probably not known generally, *viz.* that the Government grant for the upkeep of the gardens was only sufficient to keep them in a respectable condition and was insufficient for tools, stores and improvements, so that the revenue derived from the sale of rubber and rubber seeds was used for this purpose. He had indeed to bemoan the fact that by 1909 plantation seed had become available—thanks to his distribution of seed in previous years—and was able to compete with his own sales. On this account he was seriously considering concentrating on running his rubber area as a plantation in order to make sufficient revenue from sales of rubber to enable him to continue improvements in other directions. It is obvious therefore that "retrenchment" is by no means new in the history of Malaya.

In this year also the records show that one tree in the Penang Gardens tapped every year (not continuously as at present) since 1885 had yielded approximately 52½ lbs. over the period.

It is also reported that "the success of this marvellous product reached a height little dreamt of a few years ago, prices well over 9 (shillings) a pound being realized". In spite of this however it is amusing to note in the report of the late Mr. FOX who served under Ridley in the Penang Gardens, that a small parcel of rubber sent home in October was withheld as the sales were unfavourable ! !

The honour of a C.M.G was conferred on Mr. RIDLEY on his retirement from Malaya and he was also elected a Fellow of the Royal Society for his botanical investigations.

In addition to continuing his publications on the flora of Malaya, he is still a member of the Technical Sub Committee of the London Advisory Committee for Rubber Research (Ceylon & Malaya) and thus continues at the age of 80 to maintain his interest in an industry of which he may be said to have witnessed the birth. Those of us who knew his personally as a fellow scientist and friend join in wishing him Many Happy Returns of the birthday which he celebrates this month. We in Malaya, not to mention other rubber growing countries in the East owe him a considerable debt of gratitude for his pioneer work in connection with the plantation rubber industry and his optimism and faith in its future.